

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PALGE041519	FOR FURTHER ACTION <div style="float: right; font-size: small;">see Form PCT/ISA/220 as well as, where applicable, item 5 below.</div>	
International application No. PCT/KR 2004/003425	(Earliest) Priority Date (<i>day/month/year</i>) 23 December 2003 (23.12.2003)	International filing date (<i>day/month/year</i>) 23 December 2004 (23.12.2004)
Applicant <div style="text-align: center;">LG ELECTRONICS INC.</div>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 5 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see continuation of this first sheet.

2. ☐ Certain claims were found unsearchable (see continuation of this first sheet)

3. ☐ Unity of invention is lacking (see continuation of this first sheet)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in the continuation of this first sheet. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. a

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

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Continuation of first sheet

Continuation No. IV:

Text of the abstract

(Continuation of Item 5 of the first sheet)

An aspherical microlens arrays (100) comprise a base (120), and a plurality of aspherical microlenses (110) arranged on the base (120) and having different curvature radiuses and conic coefficients, respectively, along two orthogonal axes on the base (120) perpendicular to an optical axis, by which a degree of refraction, namely, a numerical aperture can be easily adjusted depending on each axial direction, a spherical aberration can be reduced, and concentration efficiency can be improved. In addition, in case of applying the aspherical microlens arrays (100) to a projection screen, an image sensor, or the like, it is advantageous to improve sensitivity and resolution thereof.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷: G02B 3/04, B29D 11/00, G02F 1/1335, H01L 31/0232

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷: G02B, B29D, G02F, H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPODOC, WPI, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CA 2 417 925 A1 (TOPPAN PRINTING CO.) 30 January 2003 (30.01.2003) <i>figures 1A-2D, 5-13, page 16, line 6 - page 30, line 8, page 31, line 5 - page 32, line 22.</i>	1, 2, 4-11, 25, 26, 29-32
Y		34, 35
A		3, 12, 27, 28
X	JP 2003-337208 A (TOPPAN PRINTING CO.) 28 November 2003 (28.11.2003) <i>figures 1-4.</i>	1
A	<i>figures 5-8, paragraphs 20-39.</i>	4, 8, 10-12, 22, 23, 25, 29-31

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
7 June 2005 (07.06.2005)Date of mailing of the international search report
28 June 2005 (28.06.2005)Name and mailing address of the ISA/AT
Austrian Patent Office
Dresdner Straße 87, A-1200 Vienna

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2001-356202 A (DAINIPPON PRINTING CO.) 26 December 2001 (26.12.2001) figures 1, 2, 4, paragraphs 4, 7-15.	1, 33
Y	—	34, 35

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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Patent document cited in search report			Publication date	Patent family member(s)			Publication date
CA	A1	2417925	2003-01-30	CN	A	1463388	2003-12-24
				US	A1	2004004770	2004-01-08
				WO	A1	02099530	2002-12-12
				EP	A1	1394603	2004-03-03
				JP	A	2003294913	2003-10-15
JP	A	20013562		none			
		02A2					
JP	A	20033372		none			
		08A2					